



Carnelley, K. B., Bejinaru, M-M., Otway, L., Baldwin, D. S., & Rowe, A. (2018). Effects of repeated attachment security priming in outpatients with primary depressive disorders. *Journal of Affective Disorders*, 234, 201-206. <https://doi.org/10.1016/j.jad.2018.02.040>

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[10.1016/j.jad.2018.02.040](https://doi.org/10.1016/j.jad.2018.02.040)

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Effects of Repeated Attachment Security Priming in Outpatients with Primary Depressive
Disorders

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Keywords: attachment, security priming, priming, depression, anxiety

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Abstract

Background: The aim of this study was to assess the potential effectiveness of secure attachment priming in outpatients with depressive disorders. *Methods:* Forty-eight participants engaged in secure attachment priming or neutral priming in the laboratory (Time 1), after which they received three daily consecutive primes via text message (Times 2-4), aimed at maintaining the effects from Time 1. A follow-up one day later (Time 5) was also included. Dependent measures were assessed at Times 1, 4 and 5. *Results:* Participants in the secure attachment priming condition experienced higher felt-security than the control group at all time-points, indicating that the felt-security benefit was maintained through repeated priming. Secure priming had a greater impact on reducing symptoms of anxiety and depression in comparison to the control prime, though the differences were only significant at Time 4. *Limitations:* The moderate sample size limited our statistical power. *Conclusions:* This study was the first experiment using repeated secure attachment priming within a clinical sample. Our findings have potential clinical implications; security priming could be used alongside other treatments to improve outcome. Recommendations for further research are discussed.

The global incidence of Major Depressive Disorder is 4.4% (Ferrari et al., 2013), dysthymia is 1.6% (Charlson, Ferrari, Flaxman, & Whiteford, 2013) and anxiety disorders is 7.3% (Baxter, Scott, Vos, & Whiteford, 2012). Depression is the second leading cause of disability according to the Global Burden of Disease Study (Ferrari et al., 2010). Mood disorders are expected to increase in incidence (e.g., National Institute for Health and Care Excellence (NICE), 2011a) and they are costly. Depression alone costs the UK £1.7 billion annually (NICE, 2011b) and Major Depressive Disorder costs the USA \$210.5 billion (Greenberg, Fournier, Sisitsky, Pike, & Kessler, 2015). Despite this, there is limited availability of psychological interventions (NICE, 2011a). Depression and anxiety disorders are treated mainly using evidence-based interventions such as Cognitive Behavioural Therapy (CBT). These interventions have limited success (less than 50% recovery rate; Department of Health, 2012), thus making a strong case for the need for alternative interventions to improve this recovery rate. Dispositional secure attachment may buffer individuals from experiencing mood disorders (Mikulincer & Shaver, 2016). We here report a simple intervention, namely attachment security priming, which has potential to alleviate symptoms in clinical samples.

Attachment theory proposes that relationships with attachment figures lead to the formation of working models about self and others (Bowlby, 1969). Different caregiving experiences, particularly with attachment figures in early life, lead to the development of secure or insecure internal representations, which become templates for future relationships and emotion regulation (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1988; Hazan & Shaver, 1987). Attachment orientations are conceptualised along two dimensions: *avoidance* of intimacy and *anxiety* about rejection (Brennan, Clark, & Shaver, 1998). An individual's position on these dimensions influences how that person manages

stress and regulates affect (Schoore & Schoore, 2008). Secure individuals score low on both dimensions. Repeated interaction with sensitive, available attachment figures leads to *felt-security*, a sense that the world is safe and attachment figures are available in times of need. Securely-attached individuals are comfortable with closeness (Ainsworth et al., 1978), seek proximity to attachment figures in times of need, and are effective emotion regulators. Those who have overprotective, inconsistent and intrusive caregiving develop a hyperactivated attachment system that leads to poor affect regulation and hypervigilance to threat in the environment (the attachment anxious strategy). Attachment anxiety is associated with lower reported personal coping abilities (Mikulincer & Florian, 1998), which may increase a sense of vulnerability to perceived stressors. Those who experience consistently neglectful, rejecting caregiving may develop a deactivated attachment system that focuses attention away from potentially threatening relationships (the avoidant strategy). Individuals high in attachment avoidance are uncomfortable with closeness and mistrust others, and develop an over-reliance on the self rather than seek proximity to others. By adulthood individuals have cognitive access to both secure *and* insecure relationship (high in anxiety and/or avoidance) models (Baldwin et al., 1996; Rowe & Carnelley, 2003) developed through diverse relationship experiences.

Attachment and Depressive and Anxiety symptoms in Non-Clinical Samples

Multiple correlational studies have explored the link between attachment styles and affective disorders (Mikulincer & Shaver, 2016). Adults with insecure attachment patterns are more likely to experience depressive symptoms (Besser & Priel, 2005; Carnelley, Otway, & Rowe, 2016; Davila, 2001; Hortaçsu, Cesur, & Oral, 1993; Williams & Riskind, 2004). Attachment anxiety and avoidance are positively associated with higher self-reported anxiety symptoms (Gilbert & Irons, 2005; Mikulincer et al., 2001; Strodl & Noller, 2003; Wei,

Heppner, Russell, & Young, 2006). Conversely, securely-attached adults are likely to manage distress better and experience less depressed mood (Besser & Priel, 2003, 2005).

Attachment and Affective Disorders in Clinical Samples

Studies with clinical samples further support the correlation between insecure attachment and affective disorders. Anxious attachment predicts more severe depressive symptoms (Bekker & Croon, 2010; Eng, Heimberg, Hart, Schneier, & Liebowitz, 2001), and worsening of depressive symptoms over 1-year (Ciechanowski, Katon, Russo, & Hirsch, 2003). Higher attachment avoidance is linked to higher depressive symptoms in women recovering from depression relative to non-depressed women (Carnelley, Pietromonaco, & Jaffe, 1994). Finally, patients with major depressive disorders report higher attachment avoidance than non-clinical groups (Reis & Grenyer, 2004). By contrast, secure attachment orientation is associated with reduced depressive symptoms (Hortaçsu et al., 1993; Kobak, Cloer, Ferenz, & Fleming, 1993; Rice & Mirzadeh, 2000) and better treatment outcome with depression interventions (Reis & Grenyer, 2004).

Similarly, attachment anxiety is associated with the severity of social anxiety disorder (Eng et al., 2001) and anxious symptoms (Bekker & Croon, 2010). Avoidant attachment is higher in patients suffering from anxiety than non-clinical groups (Reis & Grenyer, 2004). Conversely, secure attachment is linked to lower anxiety (Mikulincer, Florian, & Weller, 1993). The literature suggests that while attachment security acts as a buffer for affective disorders, insecurity is a vulnerability factor (Mikulincer & Shaver, 2016). In the current study we test this causal hypothesis.

Attachment Security Priming

The above studies explored associations between anxiety and/or depression and attachment orientations but did not test the direction of these relationships. This is possible

through security priming, which involves bringing to mind an attachment figure that makes one feel secure. Once activated, either naturally during personal interactions or artificially in the laboratory using semantic priming (for a review see Carnelley & Rowe, 2010), secure mental models temporarily guide information processing, feelings and behaviour in orientation-congruent ways (Carnelley & Rowe, 2010; Mikulincer & Shaver, 2007). Security priming has positive outcomes in the short-term (Mikulincer & Shaver, 2016), including lowered depressed and anxious mood in a non-clinical sample (Carnelley et al., 2016). Secure-primed (versus neutral-primed) participants report higher felt-security (Luke, Sedikides, & Carnelley, 2012) and these effects can be extended by repeated security priming delivered in the lab (Carnelley & Rowe, 2007) or via text (Otway, Carnelley, & Rowe, 2014). For example, repeated security priming led to lower scores on dispositional attachment anxiety (Carnelley & Rowe, 2007), suggesting that priming can potentially affect trait-like measures via the repeated activation of secure internal working models.

Text messaging has been used successfully in interventions for various difficulties, including depression (Agyapong, Ahern, McLoughlin, & Farren, 2012). Otway et al. (2014) developed a successful repeated attachment security priming methodology via text messaging in which texts are considered 'security boosters', aimed to maintain the effects of an initial secure prime over time: and found that felt-security can be maintained up to 2-days after the final secure-priming session. Both supraliminal (Mikulincer et al., 2001) and subliminal security priming (Mikulincer et al., 2001) can lead to a reduction in anxiety symptoms in a non-clinical sample. Carnelley et al. (2016) found that undergraduates primed with a secure attachment style reported lower anxious mood post-prime, which was maintained over a number of days through repeated priming. Security priming can potentially reduce psychobiological correlates of anxiety. Bryant and Chan (2015) found

secure priming to contribute towards a reduction in salivary alpha amylase levels, whereas Norman et al. (2015) found that participants in the secure-prime (versus neutral-prime) condition experienced lower amygdala activation following threat.

The existing evidence of the impact-of attachment priming on depressive symptoms is limited. Carnelley et al. (2016) found that undergraduates primed with an anxious attachment style reported more depressive symptoms than those primed with neutral, secure or avoidant attachment styles, indicating a causal relationship between anxious attachment style and depression. In a subsequent study, Carnelley et al. (2016) found that repeated security (versus neutral) priming had a marginal effect in reducing depressive symptoms in undergraduates, a trend maintained one day after the final prime.

We here examine the effects of repeated security priming as a potential intervention for patients with depressive disorders. As security priming is simple and easily delivered, it is important to see its effects as an 'addition' to existing pharmacological and psychosocial treatments.

Aims, Hypotheses, and Analysis Strategy

We explored whether priming secure attachment (versus neutral control) in a sample of patients with primary depressive diagnoses leads to differences in felt-security, and in anxiety and depressive symptoms. We also explored whether it was possible to keep a secure prime activated over 3 days via text messaging in a clinical sample. We hypothesized that participants in the secure-prime condition would report higher levels of felt-security and lower levels of depressive and anxiety symptoms, than those in the neutral-prime condition, at all post-prime time-points. We expected security priming to be beneficial to participants regardless of their dispositional attachment style and typical levels of depression and anxiety, therefore we measured and controlled for Baseline attachment

anxiety, avoidance, depression, and anxiety as covariates when they reached criteria to be included in the model (Field, 2013). In addition, we investigated whether covariates moderated the effect of priming condition on the DVs. Finally, for completeness we examined whether time moderated the effects of covariates in an exploratory fashion.

Method

Participants

The study received ethical and regulatory approvals by the University of Southampton Ethics Committee, a local NHS Research Ethics Committee and relevant NHS Trust Research and Development Department. Potential participants were informed about the project in writing before their appointment and if interested, were approached after their appointment. Patients did not receive monetary rewards. Participants were 48 adults (29 females) with a diagnosis of a primary depressive disorder who were undergoing at least one psychotropic drug treatment (diagnosis duration range 2-50 years, *Mean*=17, *SD*=11.5, 16 did not report; age range: 18-76¹, *Mean*=50.9, *SD*=13.6). Patients with bipolar disorder, psychosis or mental health problems due to primary substance misuse or organic difficulties were excluded. Diagnoses were made following full clinical assessment interviews, based on ICD-10 diagnostic criteria. (Sample characteristics: 15 (18.9%) chose not to participate, 6 (7.6%) consent but dropped out, 6 (7.6%) did not complete priming tasks and were excluded from analyses, 4 (5.1%) did not have depression or dysthymia as primary diagnosis; Primary diagnosis: 44 (91.7%) recurrent unipolar depressive disorder and 4 (8.3%) depressive episode; Comorbid (Secondary) Diagnosis: 26 (54.2%) none, 7 (14.6%) panic disorder, 5 (10.4%) Generalized Anxiety Disorder, 3 (6.3%) Alcohol use disorders, 2 (4.2%) Social Anxiety Disorder, 2 (4.2%) Eating Disorder, 1 (2.1%) Posttraumatic Stress Disorder, 1 (2.1%) Obsessive Compulsive Disorder, and 1 (2.1%) Schizoid Personality Disorder; Ethnicity: 33

(68.8%) White British, 7 (14.6%) British, 2 (4.2%) Indian, 2 (4.2%) Caucasian, 1 (2.1%) Irish, 1 (2.1%) Black British, and 2 (4.2%) Did not disclose; and Relationship Status: 20 (41.7%) Married, 10 (20.8%) Single, 9 (18.8%) Divorced, 5 (10.4%) In a relationship, 2 (4.2%) Living with partner, and 2 (4.2%) Widowed.) To detect a medium or large effect in an ANOVA with 2 groups ($f=.25$ or $.40$, respectively; $p=.05$, $power=.80$), a sample size of 128 or 52, respectively, is necessary (Cohen, 1992). Our sample size ($N = 48$) was near sufficient to detect a large effect ($power=.77$).

Materials

Attachment. The Experiences in Close Relationships short version (Wei et al., 2007) has two 6-item scales to assess attachment avoidance ($\alpha=.72$; “I am nervous when people get too close to me”) and anxiety ($\alpha=.76$; “My desire to be very close sometimes scares people away”). Respondents rated how they generally feel in close relationships on a 7-point scale, ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Mean scores were calculated after appropriate items were reverse-scored.

Depression. Baseline and post-prime depression were measured by taking the Mean of the 24 depression items (e.g., unhappy, sad, miserable) from the Profile of Mood States (POMS; McNair et al., 1992). Respondents used a 5-point scale (0=*not at all*, 4=*extremely*) to rate the extent to which they had experienced various mood states **over the past week** (Baseline, $\alpha=.95$) or how they were feeling “**right now**” (post-prime Time 1 $\alpha=.97$, Time 4= $.97$, Time 5= $.96$).

Anxiety. Baseline ($\alpha=.91$) and post-prime (Time 1 $\alpha=.94$, Time 4= $.95$, Time 5= $.76$) anxiety levels were measured by taking the Mean of the 9 anxiety-related items (e.g., tense, panicky, nervous) from the POMS.

Information on attachment figures. Participants listed up to 10 of their closest significant others (Rowe & Carnelley, 2003), chose the attachment style (secure, preoccupied, fearful-avoidant, or dismissing-avoidant; Bartholomew & Horowitz, 1991) that best illustrated how they felt in each relationship, and rated each relationship's best fit to each attachment style on a 7-point scale, 1 (*not at all representative*) to 7 (*extremely representative*).

Time 1 primes. Participants in the secure condition were asked to visualise and write about one of their secure relationships for 10 minutes (adapted from Bartz and Lydon, 2004). Participants chose spouse ($N=10$), sibling ($N=4$), friend ($N=4$), mother ($N=2$), daughter ($N=2$), aunt ($N=1$), and therapist ($N=1$). Those unable to list a secure attachment figure were given a description of a secure relationship and asked to imagine being in such a relationship ($N=1$). Those in the neutral condition visualised and wrote for 10 minutes about a large shop at a supermarket (Mikulincer & Shaver, 2001).

Text primes. Participants received instructions for visualisation tasks via text messages on three consecutive days (Carnelley et al., 2016; Otway et al., 2014). A sample secure-text-prime: "Please spend 3 minutes thinking about the relationship that you visualised in the session on Thursday [in the lab]. Try and imagine that person encouraging you to feel safe, secure and comforted. What would they say or do? When finished, please reply "Done", along with any words or thoughts that came to mind during the task". Participants in the neutral condition were asked to visualise neutral events, for example doing laundry.

Felt-security. As a manipulation check participants rated the extent to which the person or scenario in the visualisation task made them feel *secure* (4 subscales, 4 items

each: Care (e.g., supported), Safe (e.g., secure), Self-esteem (e.g., valued), and Love (e.g., *loved*) on a 6-point scale (1=*not at all*, 6=*very much*; alphas: Time 1=.96, Time 4=.96, Time 5=.97, Luke et al., 2012). Scores represent means across the 16 items.

Procedure

During Baseline, participants reported attachment dimensions, anxiety and depressed mood, and provided attachment figure information for the primes (online or on paper).

One week later (Time 1), participants (blind to condition) attended another session and completed a priming task, where they were randomly assigned to write about a secure attachment figure (secure condition) or a supermarket scenario (neutral condition).

Afterwards they reported felt-security, anxiety and depressed mood.

One day later (Time 2) participants received a text message in the morning reminding them to expect a task via text that evening. At an agreed time, participants received a text containing a 3-minute visualisation task (secure or neutral prime). This was repeated for the next two days (Times 3 and 4) resulting in three prime texts. After the last text prime, participants completed measures of felt-security, anxiety and depressed mood.

One day later (Time 5) participants completed measures of felt-security, anxiety and depressed mood. Participants received a debrief statement. Following debrief, data were anonymised.

Results

Data Preparation and Preliminary Analyses

Data were normally distributed. Missing values were identified using SPSS's Missing Value Analysis from SPSS and dealt with using SPSS's Expectation-Maximization (Field,

2013). Table 2 presents means, standard deviations and correlations between variables. If variables (i.e., attachment anxiety and avoidance, baseline depression and anxiety) met assumptions for covariate use (Field, 2013), they were included in the models below.

Felt-Security

A mixed-design ANCOVA was conducted on felt-security with time (3 levels: Time 1, 4 and 5) as the within-subjects factor and condition (2 levels: secure versus neutral priming) as a between-subjects factor with attachment avoidance, attachment anxiety, baseline depression and baseline anxiety as covariates. As hypothesised, participants in the secure-prime group ($M=3.59$, $SE=.17$) reported higher felt-security than those in the neutral-prime group ($M=2.92$, $SE=.17$, $F(1,42) = 7.70$, $p=.008$) (Figure 1). The h_r^2 (partial eta squared) indicated that prime accounted for 15.5% of the variance in felt-security. There was no significant main effect of time ($F(2,84)=0.26$, $p=.772$, $h_r^2=.006$) or time by condition interaction ($F(2,84)=0.62$, $p=.540$, $h_r^2=.015$).

Covariates baseline depression ($F(1,42)=1.57$, $p=.22$, $h_r^2=.036$), baseline anxiety ($F(1,42)=2.16$, $p=.15$, $h_r^2=.049$), and attachment anxiety ($F(1,42)=.006$, $p=.939$, $h_r^2=.000$) were not associated with felt-security. Higher attachment avoidance was associated with lower felt-security ($F(1,42)=5.30$, $p < .026$, $h_r^2=.112$). The effect of avoidance is moderated by time ($F(2,84)=4.30$, $p=.017$, $h_r^2=.093$); avoidance predicts less felt-security at Time 1 ($\beta = -.35$, $t=-3.56$, $p=.001$, $h_r^2=.234$), but not at Time 4 ($\beta=-0.09$, $t=-0.84$, $p=.404$, $h_r^2=.017$), and marginally at Time 5 ($\beta=-0.20$, $t=-1.77$, $p=.084$, $h_r^2=.069$).

Depression

A mixed-design ANCOVA was conducted on depressive symptoms with time (3 levels: Time 1, 4 and 5) as the within-subjects factor and condition (2 levels: secure versus neutral priming) as a between-subjects factor, with baseline depression and baseline anxiety as covariates. The main effect of time was nonsignificant, $F(2,88)=0.26$, $p = .71$, $h_r^2 = .006$. The main effect of prime was nonsignificant ($F(1,44)=2.76$, $p = .104$, $h_r^2 = .059$) but in the expected direction, indicating that the securely-primed group ($M=1.67$, $SE=.13$) experienced lower levels of depression in comparison to the control group ($M=1.99$, $SE=.13$). The time by prime interaction approached significance, $F(2,88)=2.38$, $p = .098$, $h_r^2=.051$). Although the effect of prime was not significant at Time 1 or at follow-up at Time 5, it was significant at Time 4 (that is, after the final text prime); the securely-primed participants reported significantly lower symptoms of depression in comparison to the control group, $t=-2.24$, $p = .030$, $h_r^2=.102$. This may indicate that the effects of the prime on depression became more pronounced following repeated priming (Figure 2).

Baseline anxiety was not associated with depressed mood, $F(1,44) = 0.12$, $p = .726$, $h_r^2 = .003$. However, higher baseline depression predicted higher depressed mood, $F(1,44) = 27.30$, $p < .001$, $h_r^2 = .383$. Baseline depression was moderated by time ($F(2,88) = 5.23$, $p = .007$, $h_r^2 = .106$), although it was significant at all 3 time-points: Time 1: $t=6.63$, $p < .001$, $\beta=.934$, $h_r^2 = .500$, Time 4: $t= 3.45$, $p < .001$, $\beta=.553$, $h_r^2 = .213$, and Time 5: $t=3.85$, $p < .001$, $\beta=.596$, $h_r^2 = .252$.

Anxiety

A mixed-design ANCOVA was conducted on anxious mood with time (3 levels: Time 1, 4 and 5) as the within-subjects factor and condition (2 levels: secure versus neutral

priming) as a between-subjects factor, with baseline depression and baseline anxiety as covariates. There was no significant main effect of time ($F(2,88)=0.20, p = .823, h_r^2 = .004$) or prime, though anxiety levels were in the predicted direction (secure-primed $M=1.84, SE=.14$; control-primed $M=2.12, SE=.14, F(1,44) = 2.02, p = .163, h_r^2 = .044$). There was no significant time by prime interaction ($F(2,88)=2.06, p = .133, h_r^2 = .045$), however the effect of prime on anxiety differed at each time-point. Figure 3 shows that the effect of prime at Time 1 ($t=-0.85, p = .400, h_r^2 = .016$) and Time 5 ($t=-0.35, p = .731, h_r^2 = .003$) were nonsignificant, but was significant at Time 4 ($t=-5.09, p = .016, h_r^2=.125$). After the last text prime, those in the secure-prime (versus control-prime) condition report lower anxiety.

Baseline depression did not predict anxiety symptoms ($F(1,44) = 0.35, p = .559, h_r^2 = .008$), however baseline anxiety did ($F(1,44) = 11.55, p < .001, h_r^2 = .208$, this was not moderated by prime). Higher baseline anxiety predicted higher post-prime anxiety levels at Time 1: $t=2.85, p = .007, \beta=.532, h_r^2 = .156$, Time 4: $t=3.08, p = .004, \beta=.573, h_r^2 = .177$, and Time 5: $t=2.53, p = .015, \beta=.586, h_r^2 = .127$.

Discussion

Our study is the first to explore the impact of repeated security priming on reducing symptoms of anxiety and depression in a clinical sample. We successfully induced feelings of security at three time-points: after the lab prime, after the final text prime, and one day after the final prime. Given the typically complex and persistent psychological difficulties experienced by the study participants, this is encouraging and suggests people could move toward greater security over longer intervals with more frequent security primes.²

Our main finding is that security priming (relative to neutral priming) reduced depression and anxiety scores after the last prime. This finding was not evident after the first lab prime session, suggesting a cumulative effect of the primes. These findings control for baseline depression and anxiety, suggesting repeated security priming may be beneficial regardless of a person's level of depression or anxiety. Future research should examine the trajectory for depression and anxiety after more priming sessions. The effects of the security primes did not persist at follow-up. Future research might follow up participants for longer and assess possible reasons for maintenance or non-maintenance of effects, for example using a daily diary method.

Limitations

Although our results are promising, they are limited. One reason might be low statistical power due to the moderate sample size. Furthermore, we recruited from a specialist mood and anxiety disorders clinical service in which patients typically have complex and long-standing difficulties, and the nature of the sample may have influenced our results. Some participants reported relatively low levels of depressed mood at Baseline so there may have been a 'ceiling effect'. Future research should take account of baseline depressive symptom severity to identify groups in which security priming is more effective. Finally, our design might have induced reporter bias, a limitation we acknowledge. Future research might conceal the exact purpose of the study or benefit from assessments of mood by independent raters.

Conclusion

This research adds to our understanding of attachment theory as it shows that repeatedly bringing to mind a security-inducing figure can lead to lowered depression and anxiety in a clinical sample. Via spreading activation one can activate the adaptive affect

regulation strategies associated with secure attachment that lead to distress alleviation and a virtuous broaden and build cycle (Frederickson, 2001). Given the high prevalence of depressive disorders, high pressure on mental health services and the sub-optimal effectiveness of current pharmacological and psychological treatments, it seems important to further examine the effects of security priming in this context, particularly as it is easily administered, even by text, and can be used alongside other treatments.

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Footnotes

¹ Age was uncorrelated with all variables.

² Baseline depression, baseline anxiety and attachment anxiety were not associated with felt-security, however, attachment avoidance was negatively associated with felt-security at Time 1. This was somewhat surprising as we expected the secure prime would over-ride the effects of dispositional attachment styles, however by Time 4 it was nonsignificant and only marginally significant at Time 5. It would be useful to determine whether attachment avoidance impacted both secure- and neutral-primed groups' felt-security equally, however, due to the small sample size, we could not test this.

Acknowledgements

We thank the patients and Magda Nowak for support. Preparation of this manuscript was supported by the Economic and Social Research Council, UK [Grant number ES/L001365/1].

Table 1

Descriptive Statistics and Correlations among All Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1 AVO	3.23	1.31	1	-.008	.078	.188	.087	.081	.044	.125	-.064	.090	-.372**	-.064	-.209
2 ANX	3.57	1.38		1	.385**	.132	.122	.112	.374**	.207	.194	.116	-.125	-.256	-.283
3 BDEP	2.11	1.08			1	.797***	.656***	.668***	.775***	.594***	.502***	.417**	-.468**	-.458**	-.443**
4 T1D	1.86	1.08				1	.784***	.755***	.546***	.760***	.586***	.510***	-.573***	-.469**	-.378**
5 T4D	1.81	1.02					1	.895***	.541***	.614***	.819***	.673***	-.503***	-.637***	-.604***
6 T5D	1.77	.96						1	.516***	.558***	.706***	.725***	-.456**	-.564***	-.584***
7 BA	2.42	.96							1	.662***	.614***	.529***	-.461**	-.480**	-.437**
8 T1A	2.01	1.03								1	.744***	.594***	-.493***	-.419**	-.270
9 T4A	1.93	1.02									1	.712***	-.416**	-.616***	-.508***
10 T5A	1.98	1.10										1	-.266	-.439**	-.437**
11 T1S	3.20	1.12											1	.749***	.634***
12 T4S	3.39	1.11												1	.857***
13 T5S	3.21	1.14													1

Note: *N* = 48. AVO = attachment avoidance; ANX = attachment anxiety; BDEP = baseline depression; T1D = depression at Time 1; T4D = depression at Time 4; T5D = depression at Time 5; BA = anxiety at baseline; T1A = anxiety at Time 1; T4A = anxiety at Time 4; T5A = anxiety at Time 5; T1S = felt-security at Time 1; T4S = felt-security at Time 4; T5S = felt-security at Time 5.

p* < .05. *p* < .01. ****p* < .001.

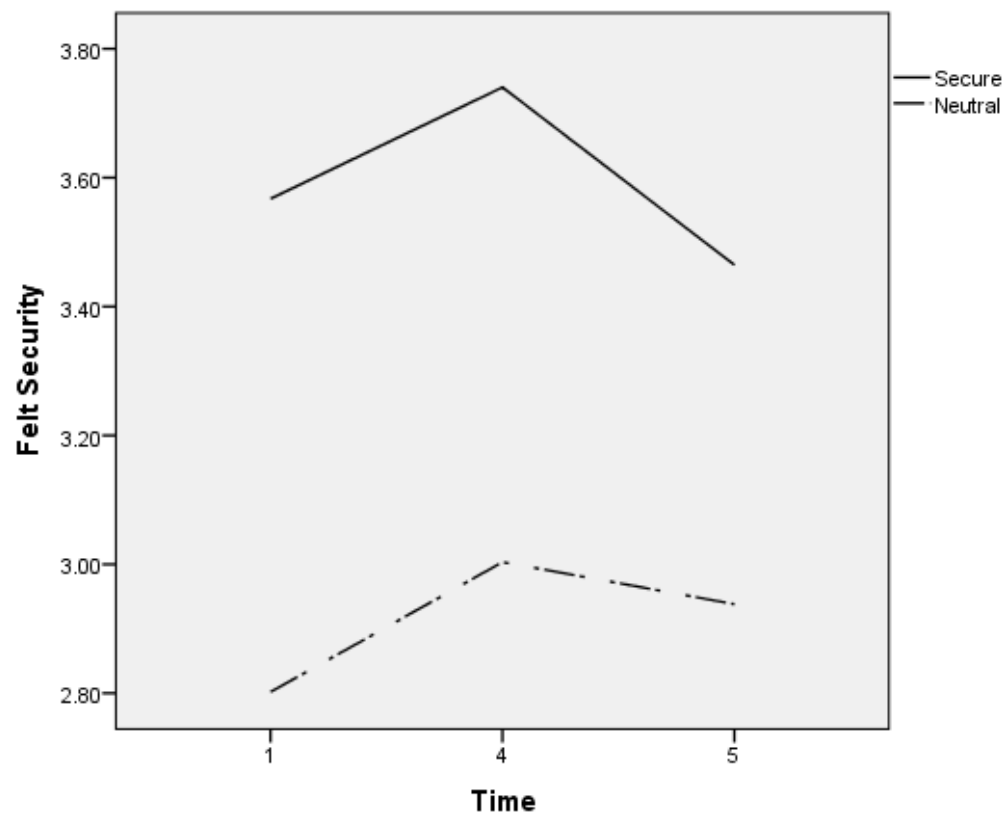


Figure 1. *Estimated Means for Felt-Security*

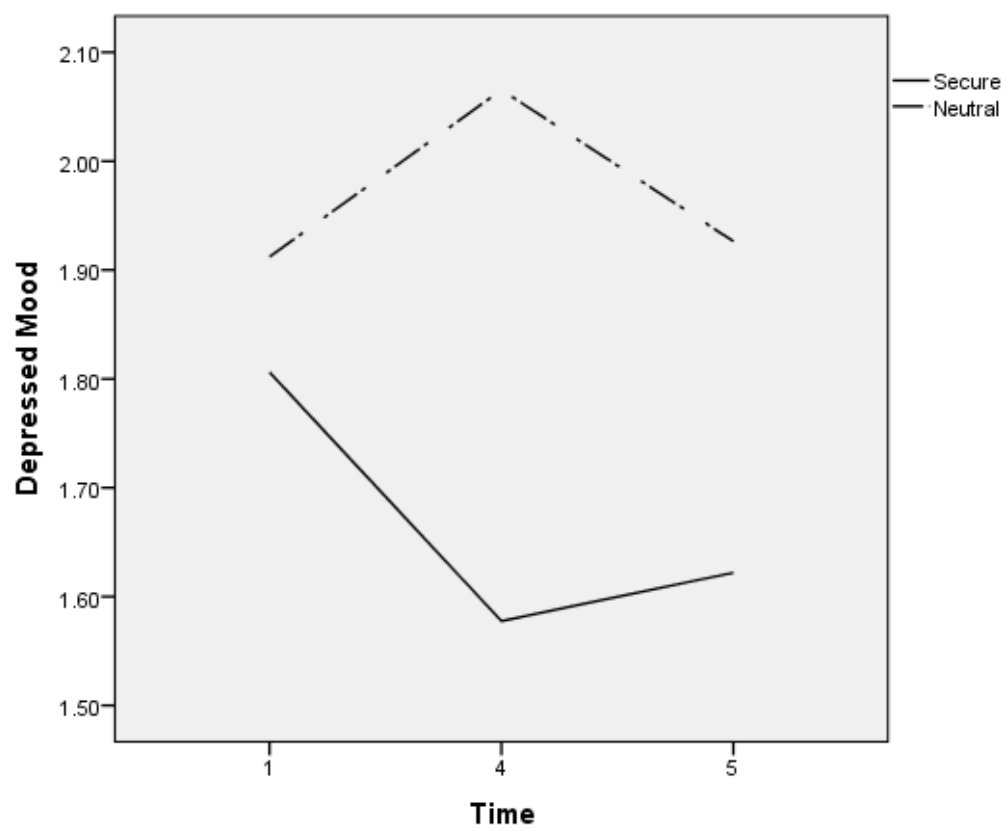


Figure 2. *Estimated Means for Depression*

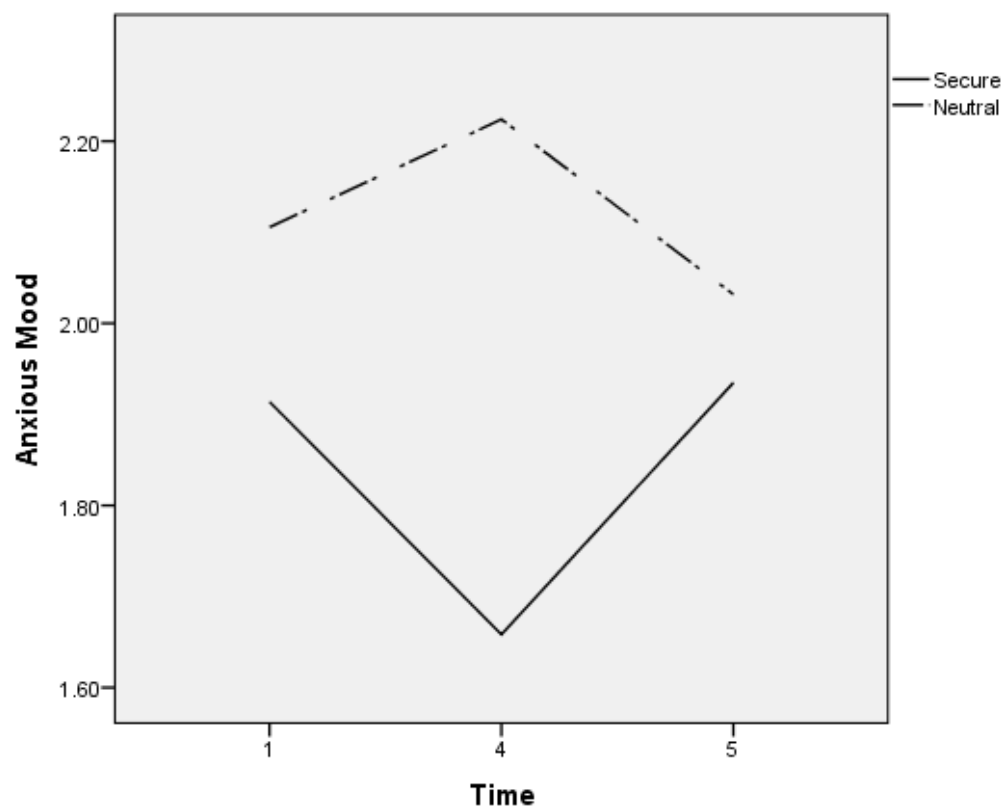


Figure 3. *Estimated Means for Anxiety*